MONTHLY WEATHER REVIEW.

Editor: Prof. CLEVELAND ABBE. Assistant Editor: FRANK OWEN STETSON.

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INTRODUCTION.

The MONTHLY WEATHER REVIEW for August, 1904, is based on data from about 3300 stations, classified as follows:

Weather Bureau stations, regular, telegraph, and mail, 167; West Indian Service, cable and mail, 4; River and Flood Service, regular 43, special river and rainfall, 190, special rainfall only, 56; voluntary observers, domestic and foreign, 2565; total Weather Bureau Service, 3025; Canadian Meteorological Service, by telegraph and mail, 20, by mail only, 13; Meteorological Service of the Azores, by cable, 2; Meteorological Office, London, by cable, 8; Mexican Telegraph Company, by cable, 3; Army Post Hospital reports, 18; United States Life-Saving Service, 9; Southern Pacific Company, 96; Hawaiian Meteorological Service, 75; Jamaica Weather Service, 130; Costa Rican Meteorological Service, 25; The New Panama Canal Company, 5; Central Meteorological Observatory of Mexico, 20 station summaries, also printed daily bulletins and charts, based on simultaneous observations at about 40 stations; Mexican Federal Telegraph Service, printed daily charts, based on about 30 stations.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Mr. R. C. Lydecker, Territorial Meteorologist, Honolulu, Hawaii; Señor Manuel E. Pastrana, Director of the Central Meteorological and Magnetic Observatory of Mexico; Camilo A. Gonzales, Director-General of Mexican Telegraphs; Capt. S. I. Kimball, Superintendent of the United States Life-Saving Service; Lieut. Commander H. M. Hodges, Hydrographer, United States Navy; H. Pittier, Director of the Physico-Geographic Institute, San José, Costa Rica; Commandant Francisco S. Chaves, Director of the Meteorological Service of the Azores, Ponta Delgada, St. Michaels, Azores; W. N. Shaw, Esq., Secretary, Meteorological Office, London; Rev. José Algué, S. J., Director, Philippine Weather Service; and H. H. Cousins, Chemist, in charge of the Jamaica Weather Office; Señor Enrique A. Del Monte, Director of the Meteorological Service of the Republic of Cuba.

Attention is called to the fact that the clocks and self-registers at regular Weather Bureau stations are all set to seventy-fifth meridian or eastern standard time, which is exactly five hours behind Greenwich time; as far as practicable, only this standard of time is used in the text of the REVIEW, since all Weather Bureau observations are required to be taken and recorded by it. The standards used by the public in the United States and Canada and by the voluntary observers are believed to conform generally to the modern international system of standard meridians, one hour apart, beginning with Greenwich. The Hawaiian standard meridian is 157° 30′, or $10^h\ 30^m$ west of Greenwich. The Costa Rican standard meridian is that of San José, $5^h\ 36^m$ west of Greenwich. Records of miscellaneous phenomena that are reported occasionally in other standards of time by voluntary observers or newspaper correspondents are sometimes corrected to agree with the eastern standard; otherwise, the local standard is mentioned.

Barometric pressures, whether "station pressures" or "sea-level pressures," are now reduced to standard gravity, so that they express pressure in a standard system of absolute measures

FORECASTS AND WARNINGS.

By Prof. E. B. GARRIOTT, in charge of Forecast Division.

August opened with a continuation over the North Atlantic Ocean and the American Continent of the comparatively quiet weather conditions that had prevailed during June and July. The only notable feature of the first decade of the month was a strong ocean current running north off Cape Hatteras at a reported rate of 2 to 3½ knots an hour, that detained southward-bound sailing vessels between Cape Henry and Cape Hatteras. A possible explanation of this phenomenon is found in abnormally high barometric pressure that covered the West Indies and the ocean to the northward and caused an unusual prevalence of fresh southerly winds off our south and middle Atlantic coasts.

During the second decade a storm of marked seasonal strength advanced from the middle longitudes of the Atlantic and crossed the British Isles on the 14th and 15th. On the 20th the first energetic storm of the summer crossed the Great Lakes and was attended by winds that reached a maximum velocity of 60 miles an hour at Buffalo, N. Y.

Throughout the month, generally, barometric disturbances in the United States were confined to the northern part of the country, and during the last half of the month they increased in intensity and were attended by isolated local storms of great severity, the most important of which occurred over the middle and upper Mississippi Valley and the southern part of the Lake region. The only important frost of the month occurred in the States of the upper Lake region on the morning of the 8th. This frost followed the passage of a disturbance that developed over Wisconsin during the night of the 6th, moved eastward to the Canadian Maritime Provinces during the 7th and 8th, and passed thence over the ocean. The importance of this disturbance lies in the fact that its origin was obscure, that it produced unlooked-for rains in the upper Lake region, was largely responsible for the occurrence of the frost referred to, and that during its advance over the Atlantic it developed into the first storm of marked energy that had appeared over the eastern Atlantic in several weeks. It is interesting, at least, to also note that five to six days after a renewal of storm action over the eastern Atlantic the first well-defined storm of the summer occurred over the eastern United States. This is another of a number of instances that have been observed in which periods of quiescent weather over the eastern United States have been preceded five to six days by marked changes in atmospheric conditions that have existed over the eastern Atlantic.

NORTH PACIFIC FORECAST DISTRICT.

The month in the North Pacific States was unusually warm and very dry, especially in the forested sections of the district. These conditions were conducive to forest fires, which early became numerous and continued throughout the month without any great check. A large amount of good timber was destroyed, but not much other property was damaged and no lives were lost so far as learned. The smoke from these